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ANNIVERSARY PUBLICATIONS.

PROCEEDINGS AT THE FIRST ANNUAL BANQUET TO GARDENERS, FLORISTS, AND NURSERYMEN.

GIVEN AT THE MERCANTILE CLUB, DECEMBER 13TH, 1890.

Under the provisions of the twenty-fourth paragraph of the fourth clause of Henry Shaw's Will, the Board of Trustees instructed the Director of the Garden to issue invitations for the first annual banquet to the gardeners of the institution, and invited florists, nurserymen, and market gardeners of St. Louis and vicinity. On the evening of the 13th of October, some sixty gentlemen assembled at the Mercantile Club. The gathering included representatives of the various horticultural interests in St. Louis; officers of the Missouri State Horticultural Society, and other prominent horticultural workers of the state; and the Presidents of the State Horticultural Societies of Illinois and Wisconsin. The Botanical Garden was represented by several members of the Board of Trustees, the Director of the Garden and his assistants, and the Head Gardener and his assistant. Among the guests present were the following:—

J. C. EVANS, President, Missouri Horticultural Society.	J. M. JORDAN, Ex-President, Society of American Florists.
J. M. SMITH, President, Wisconsin Horticultural Society.	LEVI CHUBBUCK, Secretary, Missouri Board of Agriculture.
E. A. RIEHL, President, Illinois Horticultural Society.	PROF. J. W. CLARK, Entomologist of the Missouri Experiment Station.
L. A. GOODMAN, Secretary, Missouri Horticultural Society.	S. KEHRMAN, JR., Secretary, St. Louis Florists' Club.

N. F. MURRAY, Vice-President, Missouri Horti- cultural Society.	D. I. BUSHNELL. C. YOUNG. J. M. HUDSON. CAREW E. SANDERS. EUGENE WURST. FRED. C. WEBER. WM. SCHRAY. A. WALDBART. C. W. MURTFELDT J. KOENIG. H. HEGEL. A. BERDAN. CHAS. BEYER. H. RIEMAN. WM. PAPE. E. SCHAPER. JACOB STOCKE. GEO. AMS. F. EPSTEIN. J. EPSTEIN. A. NIEMAN,
E. G. EGGELING, Superintendent of Parks, St. Louis.	
L. HUNT, Superintendent, Lafayette Park.	
HON. ISIDOR BUSH.	
PROF. M. G. KERN.	
ALFRED PLANT.	
A. NELSON.	
J. W. NORTH.	
JOHN YOUNG.	
WM. HERNE.	
CHAS. CONNON.	
CAREW SANDERS.	
CHAS. PATTERSON.	
L. ARMSTRONG.	
WM. ELLISON.	
WM. COOK.	

and representatives of the Press.

The Board of Trustees was represented by

GEORGE S. DRAKE.	CHARLES F. MILLER.
DAVID F. KAIME.	FRANCIS E. NIPHER, and
A. D. CUNNINGHAM, Secretary of the Board.	

The Botanical Garden was represented by

WILLIAM TRELEASE, Director of the Garden.	H. J. WEBBER, Assistant at the School of Botany.
A. S. HITCHCOCK, Assistant in Botany.	JAMES GURNEY, Head Gardener.
J. C. DUFFEY, Assistant in Horticulture.	J. W. DUNFORD, Assistant Gardener.

At the close of the dinner, the Director of the Garden, who presided, said: —

Gentlemen: By the will of the late Henry Shaw, — the Founder of the Missouri Botanical Garden and the Shaw School of Botany, and the donor to this city of Tower Grove Park, — the Director of the Garden is required to

preside at an "annual banquet to the gardeners of the institution, and invited florists, nurserymen, and market gardeners of St. Louis and vicinity." It is my pleasant duty this evening to welcome you, on behalf of the Trustees of the Garden, to the first dinner given under this provision of Mr. Shaw's will; the first of a long series of what I hope may prove occasions of interest and profit, recurring each year with the ripening of the choicest fruits of our land.

Doubtless with the flight of years, these occasions will grow in importance and in value to all who may be connected in any way with them. But to whatever importance they may attain, none can equal in interest the present, which you have honored with your presence, for it inaugurates this feature of the Garden. It is fitting, therefore, that some mention should be made this evening of the reason for this particular institution.

To understand this fully, requires a knowledge of the man who has established it. A business man of unusual industry and application, Henry Shaw early reached the point where he felt that he possessed enough of this world's goods to supply the needs and carry out the highest ambitions of a man of his simple tastes and benevolent mind; and at the age of forty years he retired from active business and devoted the remainder of an unusually long and active life to the development of what we trust may come to be a most useful and beneficent charity. A lover of plants in and for themselves, Mr. Shaw was no less mindful of their utility in the economy of the human race, and of their exemplification of that Divine wisdom which he loved to contemplate and which finds recognition in the language of his will and in the inscriptions graven in the stone of which some of the Garden structures are built.

"It was his faith — perhaps is mine —
That life in all its forms is one,
And that its secret conduits run
Unseen, but in unbroken line,
From the great fountain-head divine,
Through man and beast, through grain and grass."

Beginning as the private grounds of a country gentleman some forty years ago, the Garden was soon enlarged to its present size. A most interesting account of what was then doing is to be found in the leading horticultural journal of that time, — *Hovey's Magazine of Horticulture*, — for September, 1859. But a greater enlargement came at this time in its scope; for with the extension of the grounds came the erection of a museum and library building, and its partial equipment under the stimulus and advice of the then Director of the famous Kew Gardens, — Sir William Hooker, — and of Mr. Shaw's friend and our fellow townsman, the late Dr. George Engelmann.

Inspired by the Chatsworth garden, — the residence of generations of cultured English gentlemen, — the Missouri garden took in this enlargement a step far in advance of its prototype, adopting as its new model the public garden at Kew, which from the residence and pleasure grounds of royalty had become, largely under the wise guidance of the man then at its head, the leading institution for scientific botany in the world. The history of its establishment, so far as the motives therefor are now obtainable, and the instructions in the will which places it on a permanent basis, show that Mr. Shaw hoped for a somewhat similar career of usefulness for the Garden founded by him. His plans, which occupied his mind during half a life-time after the outline was adopted, are left to us in a will which impresses all who have read it as a marvel of far-sightedness and wisdom, not the least evidence of which is his forbearance in defining minutiae, leaving details, as he expresses it, "to those who may have to administer the establishment, and to shape the particular course of things to the condition of the times."

Among these plans, a prominent place was given to horticulture, in the broadest sense of the word, — the art of growing plants, and the sciences on which the successful practice of this art must rest. A personal acquaintance with Mr. Shaw during the last five years of his life, and a

careful perusal of his will, have convinced me that the Garden was intended to cover in its aims this broad field. To do this wisely, requires a more than superficial familiarity with the scope of the subject and with all that is doing in this country and elsewhere to elevate the art above the drudgery to which it is sometimes reduced. That the horticulture of this country may profit by whatever the Garden may find it practicable to do in this direction, and that the Garden may profit in laying and developing its plans by the ripest wisdom and the fullest experience of America's ablest horticulturists, will, I hope, result directly or indirectly from this institution which we inaugurate to-night. That associations favoring this mutual helpfulness might result from it, was, I do not doubt, the wish and object of the Founder of the Garden in providing for these annual gatherings.

In carrying out the ideas thus briefly outlined, the Garden must properly study how to avoid useless waste of material and energy, — how best to apply its resources that the greatest possible good may result. If I do not mistake the nature of the work before us, it should begin at home, and should first concern itself with problems of direct interest to the horticulturists of the unusually fertile though as yet but imperfectly developed region in which we are situated. It is our privilege to have with us this evening a gentleman who has for many years been connected with horticultural work in Missouri, and whose opportunities for studying its needs and for observing all that is doing for its improvement have been exceptional. We wish to profit by his knowledge, and it gives me much pleasure to introduce to you Mr. L. A. Goodman, the Secretary of the State Horticultural Society of Missouri, who has kindly agreed to speak on the horticultural needs of Missouri.

MR. GOODMAN.

Mr. Chairman and Gentlemen: The needs of Missouri in a horticultural line, I am sure, are so many and so various that I could hardly be given time to pass them over in detail, if indeed I can mention them in the few minutes allotted me. Missouri's fields are so broad, so fertile, the possibilities of Missouri are so extensive, that we have hardly begun to appreciate what we are able to do. In fact, asking what she needs seems like a question asked of a man who returned from a year's trip in Europe, where he had visited all the renowned cities of the old world. A gentleman sat down beside him and asked him to tell him all he had seen!

We believe in Missouri that we have one of the grandest states in the Union for horticulture. All along the Missouri river, from its mouth to where it enters the State in the northwest corner, we have a wonderful field for the development of the fruit interests especially. We have a magnificent apple orchard scattered along the Missouri river, and this is only a portion of what the state can do in the apple line. Only of late years have we found that in the southern part of Missouri, on the red lands of the Ozark range, are wonderful opportunities for fruit culture also. I may prophesy just a little and say that within the next ten or fifteen years we will see the peach belt of the United States along the southern slope of the Ozarks, and I believe I speak the truth.

The needs of Missouri in this matter can only be measured by the possibilities of the state. We have hardly reached a one-hundredth part of the development in this state which we can accomplish. There are hundreds of thousands of acres of land all over our State which ought to be and which will be in fruit. Speaking of the development of horticulture, I do not mean only in the fruit line,

but I mean in the broadest sense of the term, as it has been spoken of here this evening; not only fruits, but gardens, flowers, our parks, our cemeteries, our yards, our roadside planting and landscape gardening, — all these are interesting our florists, our seedmen and our gardeners; they all belong to this great realm of horticulture; and when you come to ask me the needs of Missouri in these respects, I must say that I can scarcely tell you what Missouri needs. We need good orchards first, and the knowledge required to grow those orchards. We need good gardens and development in the home adornment. We need development in the planting of the roadsides and in the flower beds of our yards, and also in landscape gardening. A noted landscape gardener came to Kansas City not many years ago, and I took him out to the south side of the city, and there, upon the hills as they were rolling out in beautiful lines south of the city, he said, “What a beautiful place to make a park! What a beautiful place for a residence portion!” And then he showed on the top of the hill, how a road ought to run, — just around the edge of it; not straight streets cut across the others at right angles, but with this main road winding around the hill. And I wished then that such a thing could happen. That is one of the needs. I would that we might see such a development in our landscape gardening, in laying out our grounds and in laying out the plans for the opening up of new lands adjoining our cities.

We need more knowledge in all this work. The knowledge that we have in the growth of horticulture is so limited. We hardly think that a tree can feel, that a tree can be injured, that a tree can weep; and sometimes, as I pass through an orchard, or as I pass through a yard, and see some trees broken, twisted, pruned wrongly, — why, it seems when I see a man doing that work, as if he was cutting my hand instead of the tree; it hurts me all over. Trees do feel; trees do weep — trees do ask for things to eat, for something to drink; and when we come to realize some of those things, we will better know what to do for them.

We need more knowledge in this respect, and I am glad that our scientists are taking this matter up, I am glad that our schools are taking this matter up, and we can get this knowledge from them. But we cannot do it all; as the Chairman has stated, the study part of the work has to come in a certain degree separate from the labor part, and so, as we try to do the labor part, we want our scientists in these schools and colleges to do the studying part, so that we may better know what to do to have successful orchards and gardens.

We want to be more business-like in our methods. We need to be more business-like in our development of the fruit interest and in the development of all parts of this horticultural work. We want to do more as the merchant does, as the lawyer does, as the mechanic does;— when we find a certain thing to be done, to go at it systematically, and judiciously, and earnestly, and make a success of that part of the work. We want, when we plant an orchard, to plant enough so that dealers will come and buy the fruit; we want to grow our fruits in lots of ten thousand bushels, twenty thousand bushels, and then, when we have a harvest to sell of ten or twenty or thirty thousand bushels of apples, it will be very easy to sell them. I have in my mind now a man in the western part of the state who sold an orchard for thirty thousand dollars. It is when men can come into these districts and get large quantities, that it is for our advantage, and so we want to be more systematic and more energetic, judicious and far-reaching in what we plan and plant.

While we need so many things, I hardly know how to state them. We want to know how to feed our plants. I wonder if we ever will; I wonder if you can ever tell us how to feed our trees (addressing the Chairman) so that they will produce a certain quality of fruit, a certain color of fruit. I wonder if feeding our trees has any thing to do with our success. I wonder if we can feed our trees as we feed our hogs and cattle, knowing that so much food will

produce so much flesh ; I wonder if a time will ever come when we can feed our vegetables so that they will be coarse and watery or fine and firm in quality. We ought to have this knowledge ; why can we not, Mr. Chairman, know more how to feed our fruit trees? we need to. Will our schools and experiment stations solve this question for us? We ought to know how to breed our fruits, our flowers, our plants; we ought to know what sort of apples to cross to get a certain quality of fruit; we ought to know what sort of pears to breed from to get a good winter pear, or one of the size of Duchess and quality of Seckel; we ought to know how to breed our fruits so as to produce the best results, or any desired results we are seeking, and we want you scientists to tell us how to do these things.

We also want new people to come in all over the state and share in the opportunities in this work that are offered throughout the state of Missouri. I tell you, there are opportunities offered for new men, new workers, all over our state, such opportunities too as are seldom offered to any people, and we want them to come in from all over the United States; we need the assistance of every one who is interested in horticulture; we need the assistance of every one who is interested in the growing of vegetables. Are you growing vegetables? Are you growing plants? Are you growing small fruits? Are you growing larger fruits? Are you a landscape gardener? Are you a florist? Are you a seedsman? If so, we want every one of you interested in this part of the work, viz., the development of our interests in this grand state of ours. The Missouri State Horticultural Society has been trying for the last eight or ten years to get as many of these interests as possible united. When we can accomplish this we will move forward in a body and not have only to present the needs of the Society, but we can then show the men who will fulfill these needs.

We need, lastly, love for this work. When a man becomes interested enough in horticultural pursuits so as to

become enthused with the pursuit, he never will let it go. There is something so fascinating about the growth of a fine orchard or a small-fruit plantation that you can scarcely find a man but who is enthusiastic over the matter. The horticulturists of Boston — and I suppose Brother Jordan can tell us something about his visits to their places — have a peculiar love for their work, which is evidenced by the magnificent results they attain. We ought to develop a love for this work also, because when we do develop such a love it gets hold of us so that we can never leave it alone. Above all, the cause of horticulture presents such a broad open field for the student in almost every branch of investigation, that there need be no hesitation of any young man fearing to enter because there is nothing to learn.

The Chairman: Mr. Goodman's statement of the needs of horticulture puts one forcibly in mind of the famous congressional prayer, — "More brains, Lord! more brains!" Some weeks since, the very practical Secretary of Agriculture, addressing a large audience of farmers in Ohio, said, "The future farmer will be more enlightened than we are to-day, in an even greater degree than we are more enlightened than those who preceded us because of the advantages we enjoy." No doubt he would have used very similar language had he been addressing a horticultural gathering, although in some respects horticulture is more advanced in this country than general agriculture. Close observers cannot fail to see that the general tendency of the times is to call for a constantly increasing intelligence on the part of those who are to succeed in any of the callings by which a useful and profitable living is to be made. It is true that innate genius may supply enough of this to lead in some cases to ample success; there will doubtless always be self-made men. But as time rolls on with its attendant increase in population, and competition becomes closer in all useful vocations, the vast majority of men must be brought up to the requisite level by suitable courses of in-

struction, made available and utilized during that early period in life when there is leisure for such schooling and when the mind is pliable and retentive. We cannot close our eyes to the indications even now before us that education is in nearly every calling a prerequisite to success, and that the man who is deprived of the opportunity to obtain it, either through his own willfulness or the deplorable force of circumstances, will in all likelihood soon find his permanent place in that large and steadily increasing class of our fellow-beings to whom life is but hopeless drudgery accompanied by privation and embittered by the thought that little more can be offered to their offspring.

As an educational institution, outside of pure botany, the Missouri Botanical Garden has yet to assume its place. But the wishes of its Founder in this respect are very explicit; and the Managing Board have already instituted a course of training for gardeners, from which much is hoped, although the number of young men to whom instruction can be given at any one time is very limited. This course has been in operation for about half-a-year. It is on trial, and we hope and expect to profit by whatever lessons are brought out by time, the real test of all things; but thus far I am pleased with the outcome. What it is proposed to do is, in brief, as follows: To take a limited number of boys or young men who have obtained a rudimentary knowledge of the English branches, and by offering them free lodgings, and wages sufficient to insure a bare subsistence during the time devoted to their studies, to practice them in all of the operations of the Garden, from the most menial up to the most responsible, at the same time seeing to it that they are given theoretical instruction in the direct line of their work and in such subjects as book-keeping, surveying, botany and entomology, and other studies that are considered necessary for a trained intelligent gardener,—such a one as either of us would wish his son to become if he were to be a gardener. This work has been started by the establishment of six scholarships, of which one is reserved for

the Horticultural Society of this state, and one for the Florists' Club of this city. Five of the six scholarships were awarded early last spring, and the young men who hold them have entered upon their work with an industry and intelligence, notwithstanding the rather discouraging nature of the course for the first year, which promise well for the future. They are lodged in a spacious dwelling adjoining the Garden, and have there, for their untrammelled use, a small but well-selected library, and a reading-room which contains most of the current horticultural papers published in the English language.

The success of such an effort as we are making in this direction, depends to no small degree on the class of young men who are attracted by it. It was to enlist the interest of the two societies that have been named, that scholarships were reserved for their nominees. The mutually helpful relations which we inaugurate this evening lead us to hope for your co-operation in what is intended to be a step forward in the elevation of gardening in the broadest sense of that word. One scholarship is vacant, no suitable applicant having appeared when the other awards were made. One has been vacated by a rather mature man, who has entered the employ of the Garden, having already had much of the theoretical work of the course in one of the Agricultural Colleges of the country, whose degree he holds. There will, therefore, be two vacancies to be filled on the first of April next, on the result of competitive examinations to be held a few weeks before that date. I mention this to-night, because I hope for your interest in calling the attention of suitable men of promise to them, so that the examinations on which awards are to be made shall be taken by young men capable of doing the best work that we can lead them in. As the years go by, I trust that I may be privileged to report the success of this step that we have taken, and to demonstrate it by introducing to such gatherings as this, graduates who may speak for themselves

and whose careers of usefulness may bear still more eloquent testimony.

The real usefulness of such a course as we propose to give, depends on the really useful character of the subjects taught. To decide what they should be, involves many considerations, and the question must be viewed from many sides. Vegetable gardening is by no means the least important branch of gardening, and it is a branch which Mr. Shaw expressly indicates as worthy of being taught in the Botanical Garden. We have with us this evening one who might speak to our profit and entertainment on any branch of horticulture, for he has long been identified with horticultural work of many kinds; but those who know him best reckon it not one of his smallest accomplishments that he has taken a piece of desert sand on the shore of one of the Great Lakes, and made it to blossom as the rose, — and more particularly to produce undreamed-of quantities of choice vegetables which find a remunerative market many hundreds of miles from the spot where they were grown, — even in our own city. It is my privilege, gentlemen, to introduce to you Hon. J. M. Smith, the President for many years of the Wisconsin Horticultural Society, whom, I am sure, you will agree with me, we shall be glad to listen to on the subject of the educational needs of a market gardener.

MR. SMITH.

Mr. Chairman and Gentlemen: The question your Chairman sent to me is — “What ought a market gardener to know?” If I should attempt to tell you all that a market gardener ought to know, I should occupy a great deal of time. I should probably have to learn, myself, many things that I do not know; and for fear that I might take more time than I ought to, or more than my share, I went to work and wrote out a few brief hints and will read

them, with your permission, thinking that possibly they may be of more service in that compact form than in any other that I could put them in. I will not occupy much time. I have only given a few brief hints, and will leave you to consider the subject, and whether they are worth your thought or not.

What ought a market gardener to know?

A number of years ago, a friend of mine purchased a farm. He was a gentleman of deservedly national reputation, and not entirely unknown among the savants and statesmen of Europe. Still, when he purchased the farm, he knew literally almost nothing about the cultivation of the soil, or of the general management of a farm. I had a number of friendly discussions with him at different times about the management and improvement of his new purchase, in one of which he made this remark: "I have been planting for some time on my farm, principally money, and have come to the conclusion that to be a good farmer, a man needs a better education, and a broader and more general one, than for any other business that I know any thing about." He was at the time a United States Senator. I replied to him, "Well, Senator, you have learned the first big lesson towards successful farming. Hundreds and thousands of so-called farmers pass their entire lives upon their farms, without learning the lesson that you have so quickly comprehended. I have great hopes that you will yet make a first-class farmer." The lesson taught by this grand and noble man upon this occasion, is fully as applicable to the market gardener, as to the general farmer. But you ask me what he should know? In the first place, he should know how to select a good location for his business. Many a man has been ruined by making a mistake here, that was fatal to any permanent success. If one has not a reliable home market, he should be very sure of good and reliable outside markets, with freight rates that will allow him to compete fully and fairly with all competitors. A second, and very important point, is the quality of the soil,

and its nearness to the market or depot, and the price at which fertilizers can be laid down in his intended garden; for he should also know that no soil is good enough to produce paying crops for any considerable length of time, without the application of plenty of fertilizers, and they must be obtained at reasonable rates. If he expects to raise very early vegetables, he should select, if possible, a light, sandy loam; as no heavy, stiff clay soil, however rich, can be made equal for earliness to a well enriched sandy loam. About the time that I commenced building up my present business, a bright, active young man commenced a market garden about one and a half miles farther from town than my own, but upon a heavy clay soil. We were competitors for a few years, and always good friends. He came to me one day and said that he was going out of market gardening. I asked him why, and he replied, "Your soil is from one to two weeks earlier than mine, in spite of all the efforts that I can make. This of itself gives you the advantage of nearly all the high prices for the first early crops. You can get to the market in half the time that I must take, and your earlier crops help you to control the outside market. The result is, that I can only have such customers as you cannot or do not care to supply."

It will be readily seen that the location and soil are of the utmost importance to any one who contemplates starting a market garden; as a few days difference in the time of putting things on the market, may make the difference between a nice profit and barely enough to pay the expense of growing, and sometimes not even that. But allowing that you have the right location, the best kind of soil, a short haul to market, with good roads, with plenty of good manure at your command at a living price, what then? One of the next things you should know, is when, where and how to purchase your seeds and plants. I am by no means sure that I am good authority upon this point, for I will confess frankly, that I get humbugged and deceived

more or less nearly every year, in my selection of seeds and plants. Of course I am anxious to grow the best of every thing in my line, and if there is something new and better than what I already have, I want it, and am willing to pay an extra price for it; but to pay an extra price for some so-called new variety of fruit or vegetable, and then to find it sometimes only an old variety, picked up and sold under a new name, and not equal to those I now have, is not conducive to any great peace of mind or body. Hence I will only say further on this point, that the greatest care should be taken to select good and reliable men to deal with, and then exercise the greatest care and good judgment in selecting your seeds and plants, or you will be sadly disappointed in the result of your year's labors. Then comes knowing how to plant, how to cultivate, how to sell, when, where and to whom, and at what prices. Some of the perishable crops, such as berries, lettuce, radishes, etc., must be sold at the time they are best fitted for the market, and must be so grown, and put upon the market in such a condition, as to be attractive and equal to the best, or loss instead of profit will be the almost inevitable result. The season of the year devoted to gathering and marketing perishable crops, is to the wide-awake and truly successful market gardener, one of ceaseless toil, almost day and night.

Please allow me to give you just a momentary glance at my own garden in this busiest season of the year. It contains 40 acres, and has three railroad depots and two steamboat docks within about one and one-half miles of its packing-house. The day laborers are supposed to put in ten hours per day, but to some others on and around the place, the time is quite differently arranged. The past season, one express train left for the north at 2 o'clock a. m., and some of our customers wished their berries and other things shipped on that train. In order to have them reach their destination in first-rate condition, they were left in our cooling house until one o'clock a. m., and then taken direct to the train,

as we know by past experience how expressmen handle fruit. Between 4 and 6 a. m. two other trains leave, between 10 and 12 (noon) two more, and from noon to 9 p. m. several more, several of which we must meet, besides the steamboats and the home trade to be looked after; while in the garden are from seventy-five to one hundred men, women, boys and girls to be looked after in their several departments, to prevent loss and waste. The weeds, as well as vegetables and berries, are growing rapidly, and the weeds must be destroyed at any cost. This condition begins with the strawberry season and lasts until the end of the currant season. Think you, it costs no care and thought to keep all these things moving along harmoniously and profitably? I have sometimes thought that if there was any place upon this earth where a lazy man was more useless than any other, it was in a market garden. As regards crops that are not so perishable, one needs to know the condition of the markets of the country; where there is a deficiency, if anywhere; and the rates of freight to such points; also the best business men in that line of produce at such places. It is also absolutely necessary that one should keep himself posted by reading papers, magazines and books that are devoted to the business in which he is engaged. No one can afford to ignore the recorded experience and best thoughts of our best men in the business, as given in such papers and books. Perhaps you are ready to ask, as I have often been asked, cannot a man become a good market gardener by simply reading and studying our best books and papers? On this subject, I have no hesitation in answering this question in the negative. As well might a man undertake to build a fine house by simply studying a book of designs. A man may be learned in all the lore of both ancient and modern gardening, and it will aid him much in his way toward success; but nothing will supply the place of every-day, level-headed common sense. He will still make many mistakes, but he must learn by his mistakes as well as by his successes. I have thus in a very

brief way indicated a few things that are imperatively necessary for a successful market gardener to know. Do you ask, What will be the result if we follow out the rules you have laid down for us? Well, you will not, even with all the advantages I have named, ever become a millionaire. They are never found among market gardeners. On the other hand, a good, level-headed, intelligent, industrious and persevering man will seldom fail to win at least a moderate fortune; and there are a good many of them in the country who are worth many tens of thousands each. As for myself, Jay Gould or Vanderbilt would no doubt call me very poor; still, wife and I do not feel so. It is nearly one-third of a century since we commenced our present business, though for several years in a very small way. The business has grown, and we have grown with it. We have passed through many changes, some very discouraging, some quite otherwise. We have given the best efforts we were capable of, to our work, and its results have been reasonably satisfactory. Our seven sons have been our best helpers and have all grown up with habits of industry, temperance and economy. Six of them are following the same business as ourselves, and are doing well, and the seventh is also a cultivator of the soil, and will, we trust, do well, as he is upright, honorable and intelligent. I do not know of any other business in which wife and I could have been happier, and perhaps in no other could we have been more useful in the community generally, than in that of market gardeners.

The Chairman: "I do hold it in the royal ordering of gardens," says Lord Bacon, "there ought to be gardens for all the months in the year, in which, severally, things of beauty may be then in season." Under a perpetually shining sun, and in a climate untouched by frost, such a garden would be the ideal surrounding for a rural home. The climate of our Mississippi Valley, while it is far from being the worst conceivable, does not permit us to realize

this ideal in the open air ; but by the judicious employment of cold houses, and temperate houses, and tropical houses, — or stoves as our English friends would call them, — substantially all may be realized. There is a prevalent notion that the growth of flowers for the market is one thing, but that the maintenance of a conservatory for the adornment of a gentleman's home is entirely another matter, so far as the money question is concerned. It is hardly necessary for me to state my own views on this point, but I trust that I may be pardoned if I say in passing that I am far from being convinced that similar business supervision of expense and methods in the two cases would not produce very similar results in the end. We have with us this evening a gentleman who has for many years been associated with the floral business of this city, and who is perfectly competent to tell us what is necessary to insure practical success in the commercial growth of flowers. It is my privilege to introduce Mr. J. M. Jordan, Past-President of the Society of American Florists, who has kindly agreed to speak to us on " the commercial florist."

MR. JORDAN.

Mr. Chairman and Gentlemen: This is a task assigned to one who has had some little experience in the practical workings of commercial florists ; but just how to present the question it is difficult for me to determine. The commercial florist's occupation is a very ancient one. We cannot tell exactly how long ago it was followed, because we read of the commercial florist in Grecian mythology. We have an account, as I believe, of the first florist that ever attempted to make a livelihood by selling flowers. There was a lady, supposed to be a beautiful Grecian artist in her way, Logena by name ; and the legend runs on that this beautiful lady gathered wild flowers and wove them into garlands and sold them in the market, or, more particularly, in the Athenian places of sport and merriment.

When some competitor had won a prize, she would weave a garland and sell it to an admirer that he might crown the victor with a wreath of flowers.

That seems to be about the first account we have of selling flowers. We are left in ignorance of any thing before this time, but this serves to show that this profession of ours is one of very early date. Some go back and say that Adam was a market gardener, but I think that he rather ran a kind of combined zoological and horticultural garden than a market garden or a florist's business. At any rate we give to this young lady of the legend the credit of being the pioneer commercial florist of the world. And there are some little incidents of this legend very similar, indeed, to our every-day experience nowadays. It was only a short time after this lady started in the business of floriculture that a rival came along—a rival from a neighboring town or city of Byzante, now known as Constantinople: and this young man, like the young men of to-day, I presume, saw that there was money in this commercial florist's business and so he set up in the business himself, close alongside of this young lady. Very much as, to-day, when a commercial florist starts in business in a certain location, somebody comes along pretty soon and starts up next door, or across the way.

The disposition of the people at that time was very much the same as it is now, because there was friction very soon created between the two. Possibly they had not studied that higher law of business, that the more opposition or competition there is in a business the greater amount there will be of that business. Those who are better informed, I think, believe it is better to have a number engaged in the same profession, although we find that same friction to-day. Well, this young man that came along there and started up in the business rather displeased the young lady, and she, like most young ladies of the present day, had a lover, and he would come around at evenings, I suppose, after he had done his day's work, and finished the chores,

and would sit down and talk with her, and at last she says to him: "There is a bad fellow around here in the neighborhood and I wish you would scare him away." Well, he took it rather seriously, and meeting the young man as he came out of the cow pasture, or, perhaps coming up through the lane, one evening, he commenced to "make faces" at him and finally squared off at him and then sailed into him in the true ethical style as followed in Boston by John L. Sullivan, and he whaled the fellow all to pieces in a little while. The consequence was that the customers of this young man rather took it to heart and, as the legend says he was the man who fixed up the flowers for the poets and literary men of the day, they thought that they ought to do something to avenge his death. So they consulted with Apollo to know what to do about it. Now Apollo, as far as we can learn, was a pretty shrewd kind of an old fellow who didn't like to go to work and do any thing very atrocious to this young woman. He had some of the gallantry that people have nowadays and he studied it over and concocted the plan and said, "Now, I will turn this fellow who has lost his life in an honorable, industrious occupation, into a flower, and I will make this young lady use this very flower if she continues in the business." And so, from the blood that was spilled, there sprang up beautiful carnations or, perhaps, sunflowers or golden-rod; it does not say exactly what kind of a flower it was. But the young lady was compelled to use these very flowers in her work and to sell them to her customers, and at last she got to love them, — to really love the fellow himself through the flowers he manifested himself in.

Now there is a lesson right here in this story for the commercial florists. It teaches us to have regard for each other, to have something in common with each other. There is too much of that friction and jealousy. There is too much of that wanting to do every thing ourselves: wanting to do it independently of every body else, unlike any one else. My few years' experience has taught me that the

more we can get together with one idea, one pursuit, assisting one another, having a common feeling for our associates in business, the better it is for us. We cannot any one of us own all the flowers. We cannot market all the flowers. We cannot supply all the customers. We do not have the ability to do it; we have not the means nor the time to do it; and therefore it must be parceled out to a great number.

The florists' business of the country and, I might say, of the civilized world, has been given a great impetus of late years. There has been some little effort made lately to ascertain the rate of increase of the business from year to year, and I think that with the completion of the present census considerable light will be thrown upon this particular branch of trade. We know now that there are about twenty-five millions of superficial feet of glass used in these United States in, to a large extent, the commercial florists' business. It is a business which ranks second to none in this country in regard to enterprise, energy and push; and, like the market gardening business spoken of by my friend Mr. Smith, ours is a business which looks more particularly for a home market. It is a very perishable commodity indeed we handle. Although large quantities of flowers are shipped long distances, it is only with great care in selecting varieties and in handling them that this is done successfully. There are many things that we have yet to learn in regard to the successful carrying on of the commercial florists' business. It has been but within the last twenty-five or thirty years that it has taken what I may call a front rank in a horticultural sense: — since the war, in fact. And one thing which a great many of the commercial florists at the time deprecated, was men of wealth going into the business for the money that there was in it solely, — investing large amounts of capital, employing skilled labor, the best they could command, for the mere money there was in it. I can only say that a very large number of those men have not found it as prof-

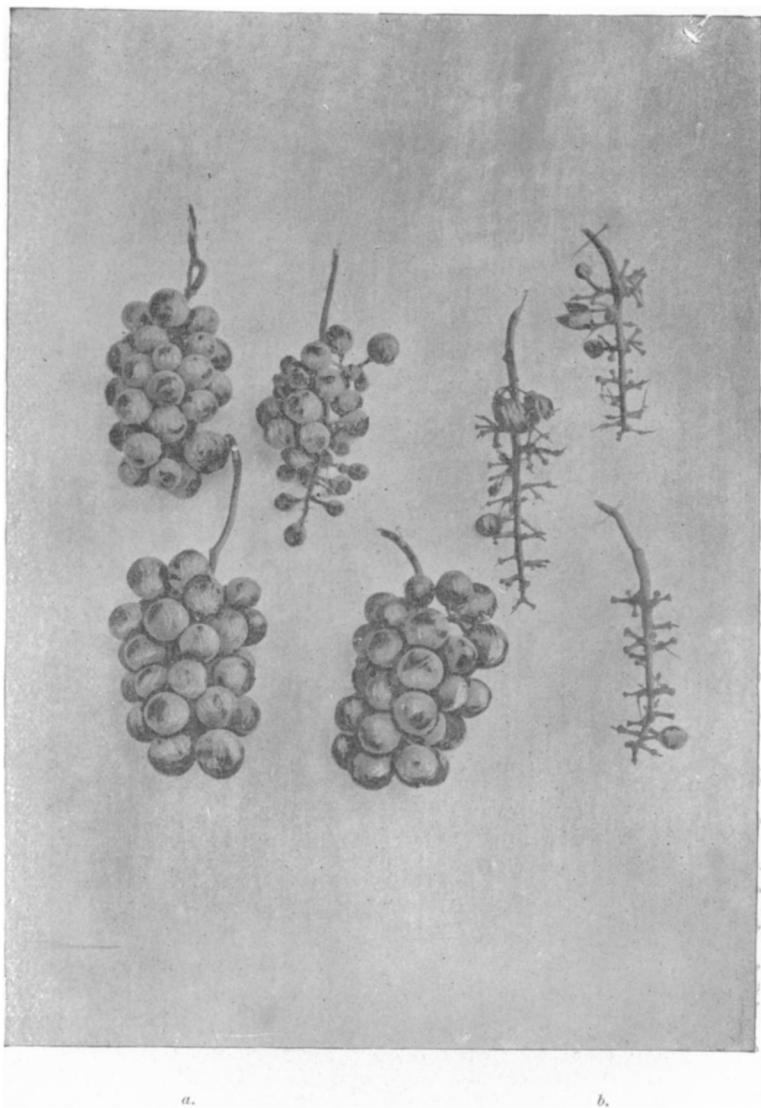
itable as they expected they would. And that opens up another idea, which I am sure you will all bear me out in, and that is that very few commercial florists have ever succeeded in their profession who did not love the business, who did not love their plants and their flowers, who did not live with them and sleep with them. Unless a man love flowers he had better not undertake their cultivation. He must prize them not for their mere money value but for their beauty, their influence, their refinement and their refining tendencies.

And that opens up to us another subject: the good the commercial florists may derive from the bequest of our late friend Henry Shaw. I tell you, gentlemen, that that bequest, if properly handled, and I hope it will be and it has every appearance at present of being so handled,—will be worth millions to us, if indeed we can measure such a thing in dollars and cents. It has set an example to every man of means in this country, and shown him that there is a wide field for the development and increased usefulness of horticulture in its various branches and more particularly in floriculture. We are indebted, and ever will be indebted, to Henry Shaw and to the Trustees who will manage that estate for all time to come; and it is our duty, as it will be for our interest, to assist and encourage by every act in our power the work that has been so nobly begun.

I am glad to hear the report from Professor Trelease in regard to the working of the school he has established here, and I think we will reap much benefit from the results of that school. It will give us a class of young men, once they shall have begun to graduate from the school, who will be able to enter the practical part of the business, taking hold from the very start, and reasoning from cause to effect; who, when called upon to do a certain work, will have the knowledge to discern whether it is in accordance with what is known of the laws of botany or horticulture as a science; and through that means we hope to stand on a

higher plane, better educated men, engaging in the pursuit of the commercial florist.

The Chairman: "To collect every information respecting the culture and treatment of all plants and trees, as well culinary as ornamental" is officially stated to be the object of the famous Royal Horticultural Society of London. The object of any horticultural institution may well conform to this outline, so far as its ability and means permit. Collecting information, however, is much more than compiling; and the institution which shall attempt to come up to the standard set by the Royal Society, must soon assume the character of a scientific establishment if it rightly estimates the work that it has laid out for its performance. For many years the grounds at Rothamsted, England, have been celebrated because of the extensive experiments on the laws of growth of plants which have been carried out there under the direction of Gilbert and Lawes. In our own country, it is not many years since one or two experiment stations were started in a small way by private means or under the care of some educational institution. But thanks to the efforts of the friends of progressive agriculture, and under the leadership of a representative of our own state, the National Government now appropriates each year a fairly large sum for the use of each state in the prosecution of such work as properly falls under the denomination of experimental investigation. Horticulture, in one or another of its branches, is the subject of experiment at nearly all of these Stations. It comprises so much in chemistry and physics and meteorology, that it requires the best guidance possible in these directions. We have with us this evening one who is recognized over the entire country as eminently qualified to speak as a scientific man on at least two of these subjects. It is the more felicitous that he also represents the Board of Trustees of the Garden. I have the pleasure of introducing to you Professor F. E. Nipher, of Washington University, who will illustrate what is meant by "experimental work."



DELAWARE GRAPES.

a. Four average bagged clusters: *b.* Three unbagged clusters (see page 30).

PROFESSOR NIPHER.

I feel some hesitation in talking about horticulture on such an occasion as this. It is true I am not wholly in the dark upon the subject: In common with all schoolboys in our region of the country, I profited by the conventional treatment of the subject which was much in vogue, learning something from observation and much more from experience. It is a matter of memory with me that the master did not always draw upon the neighboring apple orchard, but occasionally drew upon the treasures of the beech grove behind the school house. Later I remember of desperate contests with the army worm; of certain drastic applications of soft soap and water to the unresisting caterpillar; of many a still hunt for the unobtrusive but insinuating apple tree borer. With these experiences of a farmer's boy of twenty-five years ago, my horticultural training terminated.

It is, however, impossible for any intelligent person to fail to see how intimate is the relation between intelligent horticulture and certain branches of science. Not only have the results of investigations of botanists, entomologists and biologists enabled you to avoid mistakes by revealing the causes of failure, but the scientific method has become your property.

I remember that when I was a youth of ten years our village schoolmaster was considered a man of very singular habits, a most extraordinary man. He caught flies and beetles, butterflies and moths (or millers as we called them), he collected plants and weeds and he spent his noon hour in taking them apart. He made drawings of their internal arrangement and seemed much concerned to pry into matters which other persons in the community did not consider of pressing importance. He finally gave a lecture to the old folks on the "Equilibrium of Nature;" and I have seldom seen a botanist or a gardener, that I did

not think of what he said. He pictured the peaceful groves, orchards and fields of our neighborhood as a scene of deadly and unrelenting war. He showed that every worm, insect and bird was continually hunting its prey and was in turn being hunted by its enemies. It is this wholesale butchery which keeps insect pests at bay. Sometimes unusual drought or wet will give certain species an advantage. They become numerous, and then their enemies thrive and the balance is restored. And he predicted that the horticulturist and farmer would finally take an intelligent hand in this war: that they would encourage their insect friends in the slaughter of their insect enemies.

In a former, a pre-scientific time, if crops failed, or the plague came, the matter was intellectually disposed of by saying that the evil spirit did it or the angel of the Lord brought vengeance. Now we hunt for bacteria. This is the distinctive feature of science, to seek a rational explanation of things we do not understand.

It is a great step to replace the unreasoning fatalism of the pilgrim to the shrine of Mecca, by the staining solutions and the microscope of Koch. The same methods applied to the enemies of the horticulturist have produced like results. And they will produce yet greater results. The number of remedies in reach of the physician continually increases. Similarly, the means of warfare against your insect enemies must increase. The number of chemical compounds that may be produced from the known chemical elements is too vast for comprehension. The city of St. Louis does not contain houses enough to hold the books which would contain only the names of the substances which can be produced from the known elementary substances. If all the scientific men on the earth had begun to make and study these substances, with a view of finding out what use could be made of them, and had continued in ceaseless labor from the dawn of history until the present moment, their work would have just begun. They

would have made no appreciable impression on the stupendous task.

Some of these compounds are explosives. Some are medicines, which produce special effects on animals. Some are poisons. Some are fatal to insects and harmless to vertebrates. Here is a vast store-house, with material for unending progress. Some of this material, some of this labor, some of this progress, is for you. We are fortunate, that in our city has lived a man who has founded an institution broad enough for your highest and best needs.

I know that the strongest men of our time have turned their eyes in our direction. They predict that the institution which Mr. Shaw founded will do great things for science and for human welfare.

The Chairman: "A cottage and a slip of ground for a cabbage and a gooseberry bush," says Horace Walpole in his essay on modern taste in gardening, "were in all probability the earliest seats and gardens: a well and bucket succeeded to the Pison and Euphrates. As settlements increased, the orchard and the vineyard followed; and the earliest princes of tribes possessed just the necessaries of a modern farmer." To the landscape gardener is due much credit for the transformation of many a waste and many an unattractive piece of ground, into a miniature reproduction of that Eden from which our first ancestors are said to have been driven forth to eat their bread in the sweat of their brow, in an effort to compel unwilling Nature to yield them sustenance. To the unselfish work of the horticulturist and the landscape gardener, is directly attributable all that makes rural life attractive to any but the sportsman. We have with us this evening one who has devoted his life to this work of making homes and improving their surroundings, and who, in connection with one of the gentlemen who has already spoken, has done much to inculcate a love of the beautiful in nature in our children, by making

the surroundings of their schools the means of forming correct tastes at the period when the mind is most impressionable. I do not need to say that I refer to Professor M. G. Kern, who has kindly consented to respond to the sentiment "the landscape gardener," and whom I have much pleasure in introducing to you.

MR. KERN.

Mr. Chairman and Gentlemen: It gives me a great deal of pleasure to respond to the honorable mention of landscape gardening, a profession and an art to which I have devoted many of the most active years of my life. All of you gentlemen present here know how much Mr. Shaw has done for horticulture, but I would especially call your attention to his assistance and to his influence and to his noble offer to St. Louis of Tower Grove Park. He made that offer at a time when a certain popular indifference prevented the inauguration of such park improvements as a city of the size of St. Louis and of the importance of St. Louis demanded. At that time Mr. Shaw came forward with his most liberal offer of the site of Tower Grove Park. This very offer of his and his influence have paved the way to that system of public parks and prospective boulevards which we have at the present day. The sylvan beauties of Tower Grove Park, together with the attractions of the Garden, are truly a most noble object lesson for the generation in which Mr. Shaw lived, and a really blessed message to a coming century.

As for landscape gardening, I would wish to say that the art which has created all the ornamental grounds of modern times is commonly called landscape gardening. It is a compound of horticulture, of architecture, and of civil engineering. In consequence, we have a variety of landscape gardeners;—landscape architects, landscape engineers and landscape gardeners;—but no matter under what

division they are placed, no matter under what color their different little ships may sail, horticulture after all furnishes all the trim to the sail, furnishes all the material of decoration, besides the necessary knowledge and intelligence to use the material for decoration successfully. Horticulture as an agent or as a medium for the decoration of grounds, works in two ways, in two directions, which may be said to run parallel to each other up to a certain point. One direction I may call ornamental gardening at large. This branch of horticulture takes into consideration only the ground on which it operates. It builds the ground which it has to treat into beautiful lines. It creates beautiful flower combinations, beautiful shrubberies, and decorates it with all the materials of ornamentation. Landscape gardening, on the other hand, takes not only the ground, but the sky itself into consideration. It creates sky-lands. It sets up those beautiful combinations of trees which form a sylvan decoration of a certain stretch of ground. In this respect landscape gardening is entirely different from ornamental gardening. Ornamental gardening is part of landscape gardening, but it is not all of it.

This ornamental planting, as it may be called, is the branch of horticulture which is most to be recommended to the rural population, because rural districts will not and cannot indulge in the more expensive process of ornamental gardening. Flowers and all expensive ornamentation are, with a great many, out of the question. But every man who owns a home in the country can ornament his homestead with beautiful groves, with beautiful trees, with beautiful surroundings, at very little expense. And I see the greatest future for landscape gardening in the spread and advance of the knowledge of the most simple principles of the art, by which the sylvan features of every spot of ground which is inhabited by an American citizen can be improved and made beautiful. And let us look for one moment at the benefits, at the blessings and changes which our rural districts may experience by thus beautifying the

homes of the common people and, we may say, of every body who has room for a few trees. While the city will very easily take care of its own improvements, this art, this branch of horticulture, is to be introduced and developed amongst the masses of the people themselves. And it is with this object in view that I have worked for many years, and to accomplish which I have used every effort as far as was in my feeble power.

The Chairman: Many friends of horticulture from our own vicinity and from a distance have written kind and appreciative letters expressing regret at inability to meet with us this evening. Time permits me to present but a few of those which I have received.

FROM THE BISHOP OF MISSOURI.

WHITEHALL, ILL., October 2, 1890.

My Dear Prof. Trelease:

I have the invitation to the banquet to "Florists, Nurserymen and Gardeners," to be given on the 13th inst. I greatly regret that I must be in Toledo, Ohio, that day. I would much like to be present with you all at the banquet.

It is a well-earned joy that the workers among flowers and plants and trees can be enabled to sit down together for a few hours of most pleasant and social converse. The touch of kind-heartedness manifested in this direction of Mr. Shaw's bounty gratifies me exceedingly.

I wish I could be with you. Will you kindly say my regrets and my warmest wishes for a pleasant gathering to all there assembled.

Faithfully yours,

DANIEL S. TUTTLE.

FROM THE SECRETARY OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

HORTICULTURAL HALL, BOSTON, Oct. 2, 1890.

Dear Sir: Your kind invitation to the First Annual Banquet to Florists, Nurserymen and Gardeners, instituted by Henry Shaw, was duly received, and I return you hearty thanks therefor, not only on my own account, but in behalf of this society, for I presume that the invitation was sent to me not merely as an individual but as a representative of the society. I wish it were in my power to accept the invitation, for it would give me great pleasure to join with you in the institution of what I trust will be a long series of pleasant and profitable meetings, and in

honoring the memory of its founder; but it is impossible for me to attend, and I can only send my regrets.

I believe there has been no year since the foundation of the Massachusetts Horticultural Society in 1829, when either the society, or its committee of arrangements for the annual exhibition, with invited guests, has failed to sit down to a dinner together, and I can bear witness to the fact that these gatherings have had a most excellent effect in promoting a feeling of brotherhood and harmony among all who have participated in them, and I do not know that I can send you any better wish for the occasion to which you have so kindly invited me than that it may be the first of a long series which shall have as beneficial an effect as our own similar gatherings, and shall exert a wider influence for good.

Yours truly,

ROBERT MANNING.

FROM THE CHIEF OF THE FORESTRY DIVISION, UNITED STATES DEPARTMENT OF AGRICULTURE.

WASHINGTON, D. C., Oct. 4, 1890.

My Dear Sir—I regret that the disposition of my time for the present month is such as to prevent me from attending the pleasant meeting to which I have your kind invitation.

In my official position I have a special need and desire to cultivate the good-fellowship of just the men that are to be gathered at your banquet. It is through them that at least the extension of our forest areas can receive an impetus, and, as florists, nurserymen and gardeners are, like myself, engaged in studying the practical application of biological facts, I should have promised myself much profit from such an intercourse with them.

May this first of a series of banquets be so full of pleasure and profit to all present that it will justify their institution by the generous founder, and let me hope that one of its sequels will find me in position to take a seat at your table.

Very truly yours,

B. E. FERNOW.

FROM THE PRESIDENT OF THE SOCIETY OF AMERICAN FLORISTS.

BOSTON, October 1st, 1890.

Dear Sir—Your kind invitation to attend the banquet on October 13th duly received, and for which accept my sincere thanks. As I promised to act as one of the judges here at the Chrysanthemum show on the same date, and have one other engagement the same week, I will not be able to join you on that occasion. And I regret very much that there are not more public-spirited citizens like the late Mr. Henry Shaw, of your city, to remember the florists and gardeners in such a kindly manner.

I remain, yours truly,

M. H. NORTON.

FROM THE HORTICULTURAL EDITOR OF THE COUNTRY GENTLEMAN.

UNION SPRINGS, N. Y., Oct. 4, 1890.

Gentlemen: I gratefully acknowledge, and on behalf of the *Country Gentleman*, of Albany, N. Y., the receipt of your kind invitation to attend the Annual Banquet of Florists, Nurserymen and Gardeners, instituted through the noble munificence of Henry Shaw, and to be held on the 13th instant, at St. Louis, and I sincerely regret my inability to be present on the occasion, and to witness what he has thus accomplished for the benefit of his fellow-citizens, and for the whole country, so eminently worthy of their admiration.

Very respectfully,

J. J. THOMAS.

FROM THE BOTANIST OF THE BOARD OF AGRICULTURE OF PENNSYLVANIA.

GERMANTOWN, PA., Oct. 8, 1890.

My Dear Sir — I very much regret that it is not in my power to accept your kind invitation to be present at the Henry Shaw Banquet on the 13th inst.

I am the more sorry, as I have an earnest desire to see some of the good work of my many-year friend, knowing as I do the underlying motives that prompted much of his bequests. Other opportunities will, I trust, occur to me some time.

Very truly yours,

THOMAS MEEHAN.

FROM JUDGE SAMUEL MILLER.

BLUFTON, MO., Oct. 5, 1890.

Dear Sir — Your kind invitations to the Shaw Banquet both received; but when the first came I was too ill to answer, and now I regret to state that it is not likely that I can attend. My late sickness and age (79 yesterday), caution me to stay home. My presence may not be impossible, however. Let me tell you that I highly appreciate the honor, and it would no doubt be a great pleasure to me to meet so noble a crowd of congenial spirits.

If not with you in body I will be with you in spirit, and when it comes to the giving of toasts, mine will be given in writing if admitted in that way. When we have all crossed over the Dark River, may we meet the noble Henry Shaw on the bright plains o'er which the rivers of life flow; and where the noon-tide of glory reigns forever.

Yours fraternally,

SAMUEL MILLER.

The Chairman: It is a matter of pride with every Missourian that the official entomologist of this state was the first to work out the life history of the *Phylloxera*, that insect which has proved so troublesome to the French vineyards. With this came discoveries in regard to the habits of the insect, came the further discovery that the roots of our American vine are more resistant to its attacks than those of any European form of vine. Attending this came a very great demand for American vines as a means of saving the French vineyards. We are fortunate this evening in having with us a gentleman who has been very intimately connected with this work of renovating the French vineyards, the Honorable Isidor Bush, who has kindly consented to make a few remarks, and whom I have the honor to present to you.

MR. BUSH.

Mr. Chairman and my Friends: At this very late hour I will certainly beg you to excuse me if I do not speak upon a subject of the sort mentioned. You have had most practical and interesting discussions and papers on the subjects of market gardening, and of fruit culture, and, besides the practical, our dear friends, the florists, have led you into the realm of Grecian mythology and legend; and science has been ably, though in but few words, treated by our friend and scholar, Mr. Nipher; and so with landscape gardening. But one thing, in your modesty, Professor, and one which seems to me to be the one thing indispensable, was neglected; and it is certainly meet on this occasion, when we so enjoy the blessings showered upon us, to refer in memory of that great and good man, Henry Shaw, to the one thing which he most cherished, which was botany. The botanists seem to have been somewhat neglected. And so much so is this important thing neglected that, with all the science and learning displayed here, still I believe

that very few men, not excepting the gentlemen present, know who was the first botanist and what was his method of classification. Do you know that, Professor? Well, allow me to tell you that it was a man whom all the world knows and it is written in a book which the whole world knows. It is in the first chapter of the book of Moses called the Bible. And I will tell you how it reads and you can convince yourself, no matter in what translation, and you will see that on the third day the plants were created and that he classified them in only two kinds: plants bearing seed directly, each of its kind, — I know it better in Hebrew than in English, — and plants bearing fruit wherein the seed is contained, each of its kind; and that was the classification of over four thousand years ago by that old teacher, or law-giver as they called him, Moses. And every one who will look in the Bible will find expressly this classification. It is very simple. It may not be complete, but it is a botanical classification. I leave it to Professor Trelease at another opportunity to go over all the other greater and later botanists, to whom my friend the late Henry Shaw has even erected statues, — and to one a greater statue than marble or bronze, — the collected works of my deceased friend Engelmann. I thank you, my friends, and I hope you will not forget the botanist.

The Chairman: The lateness of the hour, gentlemen, and the fact that some of us have a long distance to go, renders it impossible for us to linger longer, though we might do so profitably, were this not the case. But one word, therefore, remains to be said, — a word of thanks for your presence this evening and for the interest you have shown and the good wishes that have been voiced for the future of what we who are called on to guide it trust may be made, as time goes on, a useful adjunct to progressive horticulture in all of its branches.